

WHAT IS CLAIMED IS:

1. An ink cartridge, comprising:

an ink storing portion which stores an ink to be supplied to a recording head, and which includes a flexible sheet and an outlet portion through which the ink is supplied to the recording head;

a liquid chamber which gas-tightly accommodates a liquid which contacts, under a level thereof, the flexible sheet of the ink storing portion; and

a gas supplying portion which supplies, as the ink is supplied from the ink storing portion to the recording head and accordingly a volume of the ink storing portion is decreased, a gas to the liquid chamber, so that the gas is accumulated above the liquid accommodated by the liquid chamber,

the gas supplying portion having a liquid-chamber communication hole which communicates with the liquid chamber and is open in the liquid accommodated by the liquid chamber.

2. The ink cartridge according to claim 1, wherein the liquid-chamber communication hole of the gas supplying portion is located at a height position which is lower than a height position of an interface between the liquid accommodated by the liquid chamber and the gas accumulated above the liquid.

3. The ink cartridge according to claim 2, wherein the liquid-chamber communication hole of the gas supplying portion is located at the height position which is lower than the height position of the interface when a predetermined maximum amount of the ink has been supplied from the ink storing portion to the recording head.

4. The ink cartridge according to claim 1, further comprising a case which defines, therein, the liquid chamber, wherein the case maintains a shape thereof when the volume of the ink storing portion is decreased by supplying of the ink from the ink storing portion to the recording head while the flexible sheet of the ink storing portion is deformed.

5. The ink cartridge according to claim 1, wherein the liquid comprises a water.

6. The ink cartridge according to claim 1, wherein the gas supplying portion further includes an atmosphere communication hole which communicates with an atmosphere.

7. The ink cartridge according to claim 1, wherein the liquid chamber accommodates, in addition to the liquid, an entirety of the ink storing portion.

8. The ink cartridge according to claim 6,

wherein the liquid-chamber communication hole communicates with the liquid, at a height position which is substantially level with the outlet portion of the ink storing portion.

9. The ink cartridge according to claim 1, further comprising a tubular member which defines, therein, the gas supplying portion and which is immersed in the liquid accommodated by the liquid chamber, wherein a first transverse cross section of the liquid-chamber communication hole is smaller than a second transverse cross section of the gas supplying portion.

10. The ink cartridge according to claim 9, wherein the tubular member includes a first tubular portion defining, therein, the liquid-chamber communication hole having the first transverse cross section, and a second tubular portion defining, therein, the gas supplying portion having the second transverse cross section.

11. The ink cartridge according to claim 1, wherein the gas supplying portion further includes an atmosphere communication hole which communicates with an atmosphere, wherein the ink cartridge further comprises a tubular member which defines, therein, the gas supplying portion and which is immersed in the liquid accommodated by the liquid chamber, and wherein the tubular member includes a tubular portion which projects from a top wall thereof into the

gas-supplying portion and which defines, therein, the atmosphere communication hole which communicates the atmosphere and the gas-supplying portion with each other.

12. An ink jet recording apparatus, comprising:
an ink cartridge including

an ink storing portion which stores an ink to be supplied to a recording head, and which includes a flexible sheet, and an outlet portion through which the ink is supplied to the recording head,

a liquid chamber which gas-tightly accommodates a liquid which contacts, under a level thereof, the flexible sheet of the ink storing portion,

a gas supplying portion which supplies, as the ink is supplied from the ink storing portion to the recording head and accordingly a volume of the ink storing portion is decreased, a gas to the liquid chamber, so that the gas is accumulated above the liquid accommodated by the liquid chamber,

the gas supplying portion having a liquid-chamber communication hole which communicates with the liquid chamber;

an ink jet recording head which is supplied with the ink from the ink cartridge, and which ejects a droplet of the ink toward a recording medium; and

a holding portion which holds the ink cartridge such that the liquid-chamber communication hole of the gas supplying portion is located at a height position which is lower than a

height position of an interface between the liquid accommodated by the liquid chamber and the gas accumulated above the liquid.

13. The ink jet recording apparatus according to claim 12, wherein the holding portion holds the ink cartridge such that a lower end of the liquid-chamber communication hole of the gas supplying portion is located at a height position which is lower than a height position of an ink-ejecting surface of the ink jet recording head.

14. The ink jet recording apparatus according to claim 12, further comprising a reference-position detector which detects whether the height position of the interface in the ink cartridge has reached a reference position corresponding to a predetermined maximum consumption amount of the ink.

15. An ink jet recording apparatus, comprising:
an ink cartridge including

an ink storing portion which stores an ink to be supplied to a recording head, and which includes a flexible sheet and an outlet portion through which the ink is supplied to the recording head,

a liquid chamber which gas-tightly accommodates a liquid which contacts, under a level thereof, the flexible sheet of the ink storing portion,

a gas supplying portion which supplies, as the ink is supplied from the ink storing portion to the recording head and

accordingly a volume of the ink storing portion is decreased, a gas to the liquid chamber, so that the gas is accumulated above the liquid accommodated by the liquid chamber,

the gas supplying portion having a liquid-chamber communication hole which communicates with the liquid chamber and is open in the liquid accommodated by the liquid chamber;

an ink jet recording head which is supplied with the ink from the ink cartridge, and which ejects a droplet of the ink toward a recording medium; and

a reference-position detector which detects whether a height position of an interface between the liquid accommodated by the liquid chamber and the gas accumulated above the liquid has reached a reference position corresponding to a predetermined maximum consumption amount of the ink.

16. The ink jet recording apparatus according to claim 15, wherein a lower end of the liquid-chamber communication hole of the gas supplying portion is located at a height position which is lower than the reference position.